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L1 STRUCTURE UPLOADED

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SAMPLE SEARCH INITIATED 17:58:42 FILE 'REGISTRY'
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100.0% PROCESSED 262 ITERATIONS 0 ANSWERS SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

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L3 16 SEA SSS FUL L1

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FULL ESTIMATED COST

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L4 10 L3

=> d abs fbib hitstr 1-10

- L4 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN
- AB Retinoid X receptors (RXRs) play a crit. role in the regulation of many biol. activities and their specific agonists, including oxime ligands, functionally activate both homodimer RXR:RXR and heterodimer RXR:PPAR, the later relates to insulin sensitization and has a potential application in the treatment of type II diabetes. Based on RXR and 9-cis-RA complex crystallog. data, interaction between these compds. and RXR are simulated with DCCK 4.0. After minimizing each ligand-receptor complex, from resulting energy and activity an equation is deduced with the correlation coefficient R2 = 0.64. Two CoMFA models are built and compared. One model originates from the ligand conformation extracted directly from complex, the other from energy-minimized ligands. The higher significance of the former than that of the later suggests that the conformation from induced fit of receptor be more reliable.
- AN 2001:895932 CAPLUS Full-text
- DN 136:177481
- TI Molecular modeling and QSAR studies on the interaction mechanism of retinoids binding to RXR $\,$
- AU Guo, Zong-Ru; Yi, Xiang; Wang, Min-Min; Chu, Feng-Ming
- CS Institute of Materia Medica, Peking Union Medical College, Chinese Academy

of Medical Sciences, Beijing, 100050, Peop. Rep. China

SO Huaxue Xuebao (2001), 59(11), 1925-1931

CODEN: HHHPA4; ISSN: 0567-7351

PB Kexue Chubanshe

DT Journal

LA Chinese

IT 153559-58-1 158499-05-9

RL: PAC (Pharmacological activity); BIOL (Biological study)
(mol. modeling and QSAR studies on interaction mechanism of retinoids binding to RXR)

RN 153559-58-1 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3-hydroxy-5,5,8,8-tetramethyl-2naphthalenyl)ethenyl]- (CA INDEX NAME)

RN 158499-05-9 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3-methoxy-5,5,8,8-tetramethyl-2naphthalenyl)ethenyl]- (CA INDEX NAME)

L4 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN GI

II

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- AB Title compds. (I, II, etc.; R1-R4 = H, alkvl, aralkvl, heteroarvlalkvl; R5 = alkyl, heteroalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, amino, alkoxy, etc.; R14, R15 = H, alkyl, acyl, OH, alkoxy; R14R15 = O, (substituted) methano, oxime, hydrazone, epoxy, 1,3-dioxolanyl, 1,3-dioxanyl, 1,3dithiolanyl, 1,3-dithianyl, oxazolidinyl, etc.; R27-R31 = H, alkyl, heteroalkyl, halo, amino, NO2, OH, alkoxy, etc.; R35-R38 = H, alkyl, OH, alkoxy; R35R36 or R37R38 = keto, or R35R36, R37R38, R35R37, or R36R38 = epoxy; R40 = OH, alkoxy, aralkoxy, heteroaralkoxy, amino; X, Y = C, O, S, N, SO, SO2; W = C, N, S, O; R47 = H, alkyl; R48, R49 = alkyl; R50 = alkyl, heteroalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, amino, alkoxy, etc.), were prepared Thus, 3-n-propyl-5,6,7,8-tetrahydro-5,5,8,8-tetramethylnaphthalene andmonomethyl terephthalate acid chloride in CH2C12 were treated with AlC13 to give after ester hydrolysis 4-[(3-n-propyl-5,5,8,8-tetramethyl-5,6,7,8tetrahydro-2- naphthyl)carbonyl]benzoic acid (III). Title compds. showed antagonist potencies of IC50 = 5-673 nM in a screen using RXR α receptors and LGD1069 as agonist. Capsules, tablets, suppositories, and i.v. dosage forms containing III are given.
- 1997:361549 CAPLUS Full-text AN
- DN 126:330501
- TΙ Preparation of naphthylcarbonylbenzoates, naphthylmethyloctatrienoates, and related compounds as dimer-selective retinoid X receptor modulators.
- Canan-Koch, Stacie; Hwang, Chan Kou; Boehm, Marcus F.; Badea, Beth Ann; ΙN Dardashti, Laura J.; Zhang, Lin; Nadzan, Alex M.; Heyman, Richard A.; Mukherjee, Ranjan; Lala, Deepak S.; Farmer, Luc J.; et al.
- PA Ligand Pharmaceuticals Incorporated, USA
- SO PCT Int. Appl., 181 pp.
 - CODEN: PIXXD2
- DT Patent
- LA English

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| | | | | US | 1995-4897P | P | 19951006 |
| | | | | US | 1996-9884P | P | 19960110 |
| | | | | US | 1996-18318P | P | 19960524 |
| | | | | US | 1996-21839P | P | 19960710 |
| | | | | US | 1997-979725 | Α1 | 19971126 |
| | | | | US | 1999-309370 | А3 | 19990511 |
| AU | 767255 | B2 | 20031106 | ΑU | 2001-18372 | | 20010209 |
| | | | | ΑU | 1996-73624 | АЗ | 19960917 |
| US | 20020193291 | A1 | 20021219 | US | 2001-850879 | | 20010507 |
| US | 6521633 | B2 | 20030218 | | | | |
| | | | | US | 1997-979725 | A1 | 19971126 |
| | | | | US | 1999-309370 | АЗ | 19990511 |
| US | 20040019072 | A1 | 20040129 | US | 2003-360580 | | 20030205 |
| | | | | US | 1995-4897P | P | 19951006 |
| | | | | US | 1996-9884P | P | 19960110 |
| | | | | US | 1996-18318P | P | 19960524 |
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| | | | | US | 1996-710427 | ВЗ | 19960917 |
| | | | | US | 1999-388888 | АЗ | 19990902 |
| AU | 2004200443 | A1 | 20040304 | ΑU | 2004-200443 | | 20040206 |
| | | | | ΑU | 1996-73624 | АЗ | 19960917 |
| | | | | ΑU | 2001-18372 | А3 | 20010209 |

OS MARPAT 126:330501

IT 189697-50-5P 189697-55-0P 189697-59-4P 189698-07-5F

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of naphthylcarbonylbenzoates, naphthylmethyloctatrienoates,

and

CN

related compds. as dimer-selective retinoid X receptor modulators)

RN 189697-50-5 CAPLUS

Benzoic acid, 4-[1-(3-ethoxy-5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)ethenyl]- (CA INDEX NAME)

RN 189697-55-0 CAPLUS

CN Benzoic acid, 4-[1-(3-butoxy-5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)ethenyl]- (CA INDEX NAME)

RN 189697-59-4 CAPLUS

CN Benzoic acid, 4-[1-[3-(heptyloxy)-5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2naphthalenyl]ethenyl]- (CA INDEX NAME)

RN 189698-07-5 CAPLUS

CN Benzoic acid, 4-[2-methyl-1-[5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-3-(phenylmethoxy)-2-naphthalenyl]-1-propenyl]- (9CI) (CA INDEX NAME)

IT 189698-26-3F 189699-09-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of naphthylcarbonylbenzoates, naphthylmethyloctatrienoates,

and

related compds. as dimer-selective retinoid X receptor modulators)

RN 189698-26-8 CAPLUS

CN Benzoic acid, 4-[1-(3-butoxy-5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)ethenyl]-, methyl ester (CA INDEX NAME)

Me Me
$$_{\text{Me}}$$
 $_{\text{Me}}$ $_{\text{OBu-n}}$ $_{\text{OBu-n}}$

RN 189699-09-0 CAPLUS

L4 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN GT

AB Two series of potent retinoid X receptor (RXR)-selective compds. were designed and synthesized based upon recent observation that (E)-4-[2-(5,5,8,8tetramethy1-5,6,7,8-tetrahydro-2-naphthaleny1)-1- propeny1]benzoic acid binds and transactivates only the retinoic acid receptor (RAR) subtypes whereas its 3-Me derivative binds and transactivates both the RAR and RXR subfamilies. Functional groups in the 3-position of the tetrahydronaphthalenes I [R = H,alkyl, halo, OH, OMe; X = O, CH2] results in compds. which elicit potent and selective activation of the RXR class. Such RXR-selective compds. offer pharmacol. tools for elucidating the biol. role of the individual retinoid receptors with which they interact. Activation profiles in cotransfection and competitive binding assays as well as mol. modeling calcns. demonstrate critical structural determinants that confer selectivity for members of the RXR subfamily. The most potent compound of these series, I [R = Me, X = CH2], is the first RXR-selective retinoid (designated as LGD1069) to enter clin. trials for cancer indications.

AN 1994:656056 CAPLUS Full-text

DN 121:256056

TI Synthesis and Structure-Activity Relationships of Novel Retinoid X Receptor-Selective Retinoids

AU Boehm, Marcus F.; Zhang, Lin; Badea, Beth Ann; White, Steven K.; Mais, Dale E.; Berger, Elaine; Suto, Carla M.; Goldman, Mark E.; Heyman, Richard A.

CS Department of Medicinal Chemistry, Ligand Pharmaceuticals Inc., San Diego, CA, 92121, USA

SO Journal of Medicinal Chemistry (1994), 37(18), 2930-41

CODEN: JMCMAR; ISSN: 0022-2623

DT Journal

LA English

IT 153499-12-3F 158499-13-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, in preparation of tetrahydronaphthylethenylbenzoic

acids)

RN 158499-12-8 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3-hydroxy-5,5,8,8-tetramethyl-2-

naphthalenyl)ethenyl]-, methyl ester (CA INDEX NAME)

RN 158499-13-9 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3-methoxy-5,5,8,8-tetramethyl-2-naphthalenyl)ethenyl]-, methyl ester (CA INDEX NAME)

IT 153559-58-1P 158499-05-9P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and retinoid receptor binding of)

RN 153559-58-1 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3-hydroxy-5,5,8,8-tetramethyl-2-naphthalenyl)ethenyl]- (CA INDEX NAME)

RN 158499-05-9 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3-methoxy-5,5,8,8-tetramethyl-2naphthalenyl)ethenyl]- (CA INDEX NAME)

ANSWER 4 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN

AB Ligands which selectively activate retinoid X receptors (RXR) in preference to retinoic acid receptors (RAR) are claimed. Claimed per se are several Markush structures, e.g., compds. I [R1, R2 = H, alkyl, acyl; Y = C, O, S, N, CH(OH), CO, SO, SO2, or a salt derivative; R3, R4 = H, alkyl, or is absent; R', R'' = H, alkyl, acyl, OH, alkoxy, thiol, thio ether, amino; or R'R'' = :0, :CH2, :S, :NOH, :NCN, CH2CH2, CH2O, etc.; R5, R6 = H, alkyl, halo, NO2, OH, alkoxy, SH, alkylthio, (di)(alkyl)amino, etc.; X = CO2H or derivs., CHO, tetrazolyl, PO3H2, SO3H, CH2OH, etc.], represented by 43 synthetic examples. Thus, acylation of 1,1,4,4,6-pentamethyl- 1,2,3,4-tetrahydronaphthalene by mono-Me terephthalate using PC15 and then AlC13, and saponification of the ester product, gave title compound II. In a cotransfection assay, II activated RXR subtypes (α, β, γ) with efficacies of 130%, 52%, and 82%, resp. (vs. alltrans-retinoic acid as 100%), but had <2% to <4% efficacy for RAR subtypes. I synergistically increased the activities (e.g., antihyperproliferative) of RAR-active ligands, as well as other hormonal systems (e.g., clofibrate and 1,25-dihydroxyvitamin D activities).

AN 1994:217004 CAPLUS Full-text

DN 120:217004

TI Compounds (naphthalene and indane derivatives) having selectivity for retinoid X receptors

IN Boehm, Marcus F.; Heyman, Richard A.; Zhi, Lin

TATATA

B2

PA Ligand Pharmaceuticals Inc., USA

SO PCT Int. Appl., 101 pp.

CODEN: PIXXD2

AU 675430

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND DATE | APPLICATION NO. | DATE |
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| PΙ | WO 9321146 | A1 19931028 | WO 1993-US3944 | 19930422 |
| | W: AU, BB, BG, | BR, CA, CZ, FI, | HU, JP, KP, KR, LK, | MG, MN, MW, NO, |
| | NZ, PL, PT, | RO, RU, SD, SK, | UA | |
| | RW: AT, BE, CH, | DE, DK, ES, FR, | GB, GR, IE, IT, LU, | MC, NL, PT, SE |
| | | | US 1992-872707 | A 19920422 |
| | | | US 1992-944783 | A 19920911 |
| | | | US 1993-3223 | A 19930111 |
| | | | US 1993-27747 | A 19930305 |
| | | | US 1993-52051 | A 19930421 |
| | | | US 1993-52050 | 19930421 |
| | AU 9341188 | A 19931118 | AU 1993-41188 | 19930422 |
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19970206

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US 1992-944783 A 19920911
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US 1993-52051 A 19930421

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                                                               A 19920911
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US 1993-52051 A 19930421
WO 1993-US3944 W 19930422
BR 9306284
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US 1992-872707 A 19920422
US 1992-944783 A 19920911
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RU 2144913 C1 20000127
                                          RU 1994-46449
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EP 1999-118827 19930422
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                                          US 1992-872707 A 19920422
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                                          US 1993-52051
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EP 1999-118828
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EP 983992
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US 1993-27747 A 19930305
US 1993-52051 A 19930422
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| ES 2149814 | T3 | 20001116 | WO 1993-US3944
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| PT 637297 | Т | 20010131 | US 1993-3223
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| AT 307795 | Т | 20051115 | US 1993-52051
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WO 1993-US10094 | A 19930111
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| AU 0914// | B2 | 19900321 | US 1993-3223
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US 1993-52051 | A 19930111
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A 19930421 |
| AU 9462258 | A | 19940815 | WO 1993-US10204
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| CA 2153236 | A1 | 19950209 | US 1993-27747
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A 19930305 |

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| | | | US 1993-3223 | A | 19930111 |
| | | | US 1993-27747 | A | 19930305 |
| | | | US 1993-52051 | A | 19930421 |
| | | | WO 1993-US3944 | A | 19930422 |
| US 5780676 | A | 19980714 | US 1995-485386 | ** | 19950607 |
| 05 3700070 | 2-1 | 19900714 | US 1992-872707 | В2 | 19920422 |
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| | | | US 1993-27747 | B2 | |
| | | | US 1993-52050 | | 19930421 |
| | | | US 1993-141246 | | 19931022 |
| US 5962731 | A | 19991005 | US 1995-472784 | ΗI | 19951022 |
| 05 3962/31 | Α | 19991003 | US 1992-872707 | D2 | 19920422 |
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| | | | US 1993-52051 | | 19930421 |
| | | 00000000 | US 1993-141914 | AΙ | 19931022 |
| US 6043279 | A | 20000328 | US 1997-799396 | | 19970212 |
| | | | US 1992-872707 | | 19920422 |
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| US 6610883 | B1 | 20030826 | US 1998-115615 | | 19980713 |
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| US 6320074 | В1 | 20011120 | US 1998-179674 | | 19981027 |
| | | | US 1992-872707 | В2 | 19920422 |
| | | | US 1992-944783 | | 19920911 |
| | | | US 1993-3223 | | 19930111 |
| | | | US 1993-27747 | | 19930305 |
| | | | US 1993-52051 | | 19930421 |
| | | | US 1993-141496 | A1 | 19931022 |
| | | | US 1995-479920 | В1 | 19950607 |
| GR 3032841 | Т3 | 20000731 | GR 2000-400533 | | 20000303 |
| | | | US 1993-3223 | A | 19930111 |
| | | | US 1993-27747 | A | 19930305 |
| | | | US 1993-52051 | Α | 19930421 |
| | | | WO 1993-US10204 | W | 19931022 |
| GR 3034841 | Т3 | 20010228 | GR 2000-402529 | | 20001113 |
| | | | US 1992-872707 | Α | 19920422 |
| | | | US 1992-944783 | Α | 19920911 |
| | | | US 1993-3223 | A | 19930111 |
| | | | US 1993-27747 | A | 19930305 |
| | | | US 1993-52051 | A | 19930421 |
| | | | WO 1993-US3944 | W | 19930422 |
| US 20060106072 | A1 | 20060518 | US 2005-300039 | | 20051213 |
| | | | US 1992-872707 | В2 | 19920422 |
| | | | US 1992-944783 | В2 | 19920911 |
| | | | US 1993-3223 | В2 | 19930111 |
| | | | US 1993-27747 | В2 | 19930305 |
| | | | | | |

US 1993-52051 B2 19930421 US 1993-141496 A1 19931022

OS MARPAT 120:217004

IT 153559-58-1P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, as retinoid receptor ligand)

RN 153559-58-1 CAPLUS

CN Benzoic acid, 4-[1-(5,6,7,8-tetrahydro-3-hydroxy-5,5,8,8-tetramethy1-2naphthaleny1)etheny1]- (CA INDEX NAME)

L4 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN

Ι

GI

AB An electrophotog, photoconductor has on an electroconductive support a photosensitive layer containing a charge-generating azo pigment having a structure in which a substituted or unsubstituted aromatic hydrocarbon or aromatic heterocyclic ring is bonded to an organic residue I (R1, R2 = H, alkyl, acyl, aryl, aralkyl, cyano; R3 = aromatic hydrocarbon or heterocyclic group containing optional substituents; X = organic residue forming polycyclic aromatic ring or heterocycle by fusion with the benzene ring) directly or via a linking group.

AN 1990:506321 CAPLUS Full-text

DN 113:106321

TI Electrophotographic photoconductor containing azo pigment

IN Kashizaki, Yoshiro

PA Canon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|-------------|------|----------|-----------------|----------|
| | | | | | |
| PΙ | JP 01100560 | A | 19890418 | JP 1987-257377 | 19871014 |
| | JP 08014703 | В | 19960214 | | |
| | | | | JP 1987-257377 | 19871014 |

IT 126610-24-4F 126646-70-6F

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and use of, as electrophotog. charge-generating agent)

RN 126620-24-4 CAPLUS

PAGE 1-B

RN 126646-70-6 CAPLUS

CN 11H-Benzo[a]carbazole-3-carboxamide, 1-[[7-[[3-(1,2-diphenylethenyl)-2-hydroxy-1-naphthalenyl]azo]-5,5-dioxido-3-dibenzothienyl]azo]-2-hydroxy-N-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN

AB Ketones reacted with aluminum phenoxides in refluxing xylene to give 56-91% isomerically pure o-vinyl phenols. E.g., Al(OPh)3, generated in situ from PhOH and Al turnings, reacted with Me2CO (20 h) to give 56% 2-CH2:CMeC6H4OH.

AN 1980:58353 CAPLUS Full-text

DN 92:58353

OREF 92:9659a,9662a

TI Regiospecificity in reactions between metal phenoxides and ketones. One-step synthesis of ortho-vinylphenols

AU Casiraghi, Giovanni; Casnati, Giuseppe; Sartori, Giovanni; Bolzoni, Luciana

CS Ist. Chim. Org., Univ. Parma, Parma, Italy SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1979), (8), 2027-9 CODEN: JCPRB4; ISSN: 0300-922X DT Journal LA English OS CASREACT 92:58353 ΙT 72471-04-6F RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, by reaction of aluminum phenoxide with ketone) 72471-04-6 CAPLUS RN CN 2-Naphthalenol, 3-(1-phenylethenyl)- (CA INDEX NAME)

L4 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN

GI For diagram(s), see printed CA Issue.

AB Long-chain alkyl substitution at positions 5, 6, and 8 of 1,3-diaminobenzo[f]quinazoline derivs. (folate antagonist) did not affect or decrease the antibacterial and cytotoxic action compared to that of the parent compds., but increased the antimalarial activity. The most active compound against Plasmodium berghei in mice was 1,3-diamino-6-n-hexylbenzo[f]quinazoline (I) [53526-04-8], which at 640 mg/kg s.c.increased survival time almost 3-fold compared to controls. The most potent antibacterial activity in vitro was shown by 1,3-diamino-6-chlorobenzo[f]quinazoline [53526-05-9] against Streptococcus faecium (50% inhibitory dose 0.003 µM). I was prepared by reaction of 1-bromonaphthalene [90-11-9] with n-hexyllithium [1934-75-4], nitration in the free position, catalytic hydrogenation to the amine, and reaction with Na dicyanamide.

AN 1975:508137 CAPLUS Full-text

DN 83:108137

OREF 83:16881a,16884a

TI Quinazolines. 12. 1,3-Diaminobenzo[f]quinazolines containing long-chain alkyl or chloro substituents on the central ring. Synthesis and biological evaluation as candidate antifolate and antimalarial agents

AU Rosowsky, Andre; Huang, Ping C.; Papathanasopoulos, Nickolas; Modest, Edward J.

CS Child. Cancer Res. Found., Harvard Med. Sch., Boston, MA, USA

SO Journal of Medicinal Chemistry (1974), 17(11), 1217-22 CODEN: JMCMAR; ISSN: 0022-2623

DT Journal

LA English

IT 53526-16-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reduction of)

RN 53526-16-2 CAPLUS

CN Naphthalene, 2,2'-(1-heptenylidene)bis[3-methoxy- (CA INDEX NAME)

L4

AB

ANSWER 8 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN A method is given for the prepn. of intermediates for the synthesis of aldosterone and 18-hydroxycorticosterone. EtMqBr (from Mq 2.432 and EtBr 9.820) in anhydrous Et2O 110 is cooled to 12-15°, freshly distilled ethoxyacetylene 7.88 in anhydrous Et20 51.5 added over 30 min., when ethane ceases to evolve the mixture stirred 15 min. with ice H2O cooling, the system homogenized by addition of C6H6 110, $2 \rightarrow 4\beta$ -lactone of 2α -methallyl- 2β $carboxy-4b\beta-methyl-7,7-ethylenedioxy-1,2,3,4,4a\alpha,4b,5,6,7,8,10,10a\beta$ dodecahydrophenanthren-4 β - ol-1-one 7.115 in C6H6 80 parts added dropwise over 15 min. at $0-3^{\circ}$, the mixture stirred 3 hrs. at this temperature, ice and saturated NH4Cl added, the organic layer washed with NH4Cl solution and H2O, dried, filtered, evaporated in vacuo, the residue dissolved in Et20, filtered through activated C, and concentrated to give 2 \rightarrow 4 β -lactone of 1ethoxyethynyl- 2α -methallyl- 2β -carboxy- $4b\beta$ -methyl-7,7-ethylenedioxy- $1, 2, 3, 4, 4a\alpha, 4b, 5, 6, 7, 8, 10, 10a\beta$ -dodecahydrophenanthrene- $1, 4\beta$ -diol (I), m. 138-40°. I 221.3 in anhydrous C5H5N 6500 is agitated with 10% Pd-CaCO3 100 parts at room temperature in H atmospheric, after 1 mole H is absorbed the mixture filtered, the residue washed with C5H5N, the filtrate evaporated to dryness in vacuo, the residue dissolved in Et2O, filtered through activated C, concentrated to a small volume, and cautiously mixed with petr. ether to give $2 \rightarrow 4\beta$ -lactone of 1-ethoxyvinyl-2 α -methallyl-2 β -carboxy-4b β -methyl-7,7ethylenedioxy-1,2,3,4,4a α ,4b,5,6,7,8,10,10a β - dodecahydrophenanthrene-1,4 β diol (II), m. $18.5-110^{\circ}$ and $136-7^{\circ}$. To II 4.45 in anhydrous C5H5N 200 under anhydrous N atmospheric is added dropwise 2M SOC12 55 in anhydrous C5H5N at 0-3° over 5 min., the mixture stirred an addnl. 15 min. at this temperature, poured into M NH4HCO3 1000 and ice 100, the vessel washed with Et2O 1250 parts, after thorough agitation the ether solution washed with ice-cold M NH4HCO3 and ice H2O, dried, filtered, distilled in vacuo, and the residue recrystd. from Et2O to give 2 \rightarrow 4 β -lactone of 1,1-formylmethylene-2- α methallyl- 2β -carboxy- $4b\beta$ -methyl-7,7-ethylenedioxy- $1, 2, 3, 4, 4a\alpha, 4b, 5, 6, 7, 8, 10, 10a\beta$ -dodecahydrophenanthren- 4β - ol (III), m. 188-90°. III 39.85 in anhydrous EtOH 1000 is mixed with 2.5% Pd-SrCO3 10 parts at room temperature under H, after 0.95 mole equivalent H is absorbed the solution filtered, the filtrate evaporated in vacuo, the mixture fractionated on a cellulose column in 80% aqueous MeOH-heptane, and the product recrystd. from Et2O-petr. ether to give 2 \rightarrow 4 β -lactone of 1 β -formylmethyl-2 α -methallyl- 2β -carboxy- $4b\beta$ -methyl- 7,7-ethylenedioxy-1,2,3,4, $4a\alpha$,4b,5,6,7,8,10,10 $a\beta$ dodecahydrophenanthren-4 β -ol (IV). IV 4.005 in C6H6 50 is mixed with OsO4 2.670, the mixture stirred 3 hrs. under N, MeOH 350 added, the solution mixed with Na2SO3 6.3 in H2O 100, agitated 20 min. under N, filtered, the filtrate freed of organic solvents in vacuo, the aqueous suspension extracted with CH2Cl2, the exts. washed with icecold N Na2CO3 and H2O, dried, evaporated, the product dissolved in MeOH 89 and C5H5N 1, paraperiodic acid 3.4 in H2O 10 parts added, the mixture stirred 1 hr. at room temperature under N, diluted with H2O, extracted with 3:1 Et2O-CH2C12, the exts. washed with H2O, dried, and evaporated in vacuo to give 2 \rightarrow 4 β -lactone of 1 β -formylmethyl- 2 α acetonv1-2β-carboxv-4bβ-methv1-7,7-ethvlenedioxv- $1,2,3,4,4a\alpha,4b,5,6,7,8,10,10a\beta$ -dodecahydrophenanthren- 4β - ol. Prepared

similarly are: 2 \rightarrow 4 β -lactone of 1-ethoxyethynyl-2 α -allyl-2 β -carboxy-4 β -

methyl-7,7- ethylenedioxy-1,2,3,4,4a α ,4b,5,6,7,8,10,10a β dodecahydrophenanth rene-1,4 β -diol, m. 149-52°; 2 \rightarrow 4 β -lactone of 1-(2-ethoxyvinyl)-2 α -allyl-2 β -carboxy-4b β -methyl-7,7- ethylenedioxy-1,2,3,4,4a α ,4b,5,6,7,8,10,10a β -dodecahydrophenanthrene-1,4 β -diol, m. 120-2°; 2 \rightarrow 4 β -lactone of 1 β -formylmethyl-2 α -allyl-2 β -carboxy-4b β -methyl-7,7-ethylenedioxy-1,2,3,4,4a α ,4a β ,5,6,7,8,10,10a.bet a.-dodecahydrophenanthren-4 β -ol; 2 \rightarrow 4 β -lactone of 1 β ,2 α -bis(formylmethyl)-2 β -carboxy-4b β -methyl-7,7- ethylenedioxy-1,2,3,4,4a α ,4b,5,6,7,8,10,10a β - dodecahydrophenanthren-4 β -ol; and 2 \rightarrow 4 β -lactone of 1 β -formylmethyl-2 α -(α -acetoxyacetonyl)-2 β -carboxy-4b β -methyl-7,7- ethylenedioxy-1,2,3,4,4a α ,4b,5,6,7,8,10,10a.beta .-dodecahydrophenanthren-4 β -ol.

3 DD1 T03 DT011 110

AN 1961:87417 CAPLUS Full-text

DN 55:87417

OREF 55:16506i,16507a-h

TI Polyhydrophenanthrene compounds

IN Reichstein, Tadeus

DT Patent

LA Unavailable

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--------------------|----------|-------------|----------------------|--------------|
| | | | | | |
| ΡI | GB 805606 | | 19581210 | GB 1957-78257 | 19550114 |
| ΙT | 103033-89-2 | | | | |
| | (Derived from d | ata in t | he 6th Coll | ective Formula Index | (1957-1961)) |
| RN | 103033-89-2 CAPLU | S | | | |
| CN | 2-Phenanthreneacry | lic acid | , 8-carboxy | -4b,5,6,7,8,8a,9,10- | octahydro-3- |

methoxy-4b, 8-dimethyl-β-phenyl- (6CI) (CA INDEX NAME)

ANSWER 9 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN T. 4 Me O-methyl-7-acetylpodocarpate (Ia) 1500 and BrCH2CO2Et 770 in C6H6 2640 AB added with heating to specially prepared Zn 313 parts, the mixture refluxed 2 hrs., unreacted In removed, and the mixture acidified gave Me O-methyl-7-[2-(1-ethoxycarbonyl-2-hydroxypropyl)]podocarpate (I), b0.07 190-7°, [α]D 105°. I 1500, AcCl 1650, and Ac20 2300 parts refluxed 50 min. gave Me O-methyl-7-(α methyl- β - ethoxycarbonylvinyl)podocarpate (II), b0.15 195°, [α]D 117°. The β -MeO analog was similarly obtained by substitution of Me bromoacetate. II 288, KOH 100, propylene glycol 2100, H2O 500, and MeOH 320 parts heated 3 hrs. at 90-100° gave Me O-methyl-7-(α -methyl- β -carboxyvinyl)podocarpate (III). [α]D 129°. I 200, H2O 2000, MeOH 3200, and NaOH 300 parts refluxed 4 hrs. gave Me O-methyl-7-[2-(1-carboxy-2- hydroxypropyl)]podocarpate. III heated 1.5 hrs. at 210° with C5H5N.HCl gave the lactone of 7-(α -methyl- β carboxyvinyl)podocarpic acid, m. 287-9° (MeOH). Me O-methylpodocarpate and PhCl at 10° treated 10 min. with AlCl3, the mixture stirred 3 hrs. at 10° with EtCOCl in PhCl, left 15 hrs. at room temperature, decomposed, the PhCl steam distilled, and the solid recrystd. gave Me O-methyl-7-propionylpodocarpate

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(IV), m. 100-2° (MeOH). IV in C6H6 treated as above with BrCH2CO2Et and Zn
      dust gave after acetylating, Me O-methyl-7-(\alpha-ethyl-\beta-
      ethoxycarbonylvinyl)podocarpate (V), b0.01 185-95°. V, KOH, MeOH, H2O, and
      propylene glycol heated 3 hrs. gave Me O-methyl-7-(\alpha-ethyl-\beta-
      carboxyvinyl)podocarpate. Ia and MeCHBrCO2Et in C6H6 treated with Zn and the
      mixture refluxed 2 hrs. gave Me O-methyl-7-[2-(2-hydroxy-3-ethoxy-
      carbonylbutyl]podocarpate (VI), b0.08 200°. VI, AcCl, and Ac20 refluxed 1 hr.
      and distilled gave Me O-methyl-7-(\alpha, \beta-dimethyl-\beta-
      ethoxycarbonylvinyl)podocarpate (VII), b0.1 190°. VII 100, KOH 35, propylene
      glycol 720, H20 180, and MeOH 100 parts heated 3 hrs. at 90-100° gave Me O-
      methyl-7-(\alpha, \beta-dimethyl-\beta-carboxyvinyl)podocarpate. Et2SO4 refluxed 5 min. with
      podocarpic acid and NaOH in 50% alc. gave Et O-ethylpodocarpate (VIII). VIII
      treated with AcCl, PhNO2, and AlCl3 3 hrs. at 0° and left 100 hrs. gave Et O-
      ethyl-7-acetylpodocarpate (IX). IX treated with Et 2-bromohexanoate and the
      product dehydrated and hydrolyzed gave Et O-ethyl-7-(\alpha-methyl-\alpha-butyl-\beta-
      carboxyvinyl)podocarpate, [\alpha]D 106°. Me O-methylpodocarpate treated 18 hrs.
      at 25° with AlC13, BzCl, and PhCl gave Me O-methyl-7-benzoylpodocarpate, m.
      114-19°. This material converted into Me O-methyl-7-(\alpha-phenyl-\beta-
      ethoxycarbonylvinyl)podocarpate (X), m. 163-5.5°. X heated 1.5 hrs. at 210°
      with C5H5N.HCl gave the lactone of 7-(\alpha-phenyl-\beta-carboxyvinyl)-podocarpic acid
      (XI), m. 242-5^{\circ}. XI in MeOH left 0.5 hr. with Et2SO4 and Na2CO3 gave the
      lactone of Et 7-(\alpha-phenyl-\beta-carboxyvinyl)podocarpate. X in H2O autoclaved 8
      hrs. at 150° with alc. and KOH gave O-methyl-7-(\alpha-phenyl-\beta-
      carboxyvinyl)podocarpic acid (XII). XII and C5H5N.HCl heated 10 min. at 210°
      and the product chromatographed on silica gel gave lactone of Me 7-(\alpha-methyl-
      \beta- carboxyvinyl)podocarpate, m. 267-9° (CHCl3-MeOH). V in C5H5N.HCl heated
      1.5 hrs. at 210° gave lactone of 7-(\alpha-\text{ethyl-}\beta-\text{carboxyvinyl}) podocarpic acid.
     1961:87416 CAPLUS Full-text
     55:87416
OREF 55:16506c-i
     1,12-Dimethyl-6-hydroxy-7-(\beta-carboxyalkenyl)-1,2,3,4,9,10,11,12-
     octahydrophenanthrene-I-carboxylic acid esters
     Bible, Roy H., Jr.
     G.D. Searle and Co.
     Patent
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LA Unavailable FAN.CNT 1

AN

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TT

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PATENT NO. KIND APPLICATION NO. DATE DATE US 2971008 19600000

PΤ TT 103033-89-2 124422-36-2

(Derived from data in the 6th Collective Formula Index (1957-1961))

RN 103033-89-2 CAPLUS

CN 2-Phenanthreneacrylic acid, 8-carboxy-4b, 5, 6, 7, 8, 8a, 9, 10-octahydro-3methoxy-4b, 8-dimethyl-β-phenyl- (6CI) (CA INDEX NAME)

RN 124422-36-2 CAPLUS

CN 2-Phenanthreneacrylic acid, 8-carboxy-4b,5,6,7,8,8a,9,10-octahydro-3-methoxy-4b,8-dimethyl- β -phenyl-, 2-ethyl 8-methyl ester (6CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

L4 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN

AB Indam (I) or I-contg. hydrocarbon mixts. were catalytically dehydrogenated at 550-670° in the presence of oxides of W, Mo, or Mn. or their mixts. and of steam to give indene (II). Thus, 50 cc. I and 75 cc. H2O was passed as vapor during 2 hrs. through a heated quartz tube (600-50°) containing 230 cc. 1:1 MnO2-MoO3 on pumice to give a product containing 75% II.

AN 1961:87415 CAPLUS Full-text

DN 55:87415

OREF 55:16506b-c

TI Indene

IN Franck, Heinz Gerhard; Grigoleit, Georg

PA Gesellschaft fur Teerverwertung m. b. H.

DT Patent

LA Unavailable

FAN.CNT 1

| | PATENT NO. | | | KIND | | ATE | | APPL: | APPLICATION NO. | | | DATE | |
|----|-------------|------|------|------|-----|-------|------|--------|-----------------|-------|------|----------|--|
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| ΡI | DE 1074578 | | | | 19 | 9600: | 204 | DE | | | | | |
| ΙT | 124422-36-2 | | | | | | | | | | | | |
| | (Derived | from | data | in | the | 6th | Coll | ective | Formula | Index | (195 | 7-1961)) | |

RN 124422-36-2 CAPLUS

CN 2-Phenanthreneacrylic acid, 8-carboxy-4b,5,6,7,8,8a,9,10-octahydro-3-methoxy-4b,8-dimethyl- β -phenyl-, 2-ethyl 8-methyl ester (6CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

| => logoff y
COST IN U.S. DOLLARS | SINCE FILE
ENTRY | TOTAL |
|--|---------------------|------------------|
| FULL ESTIMATED COST | 66.35 | 244.92 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE
ENTRY | TOTAL
SESSION |
| CA SUBSCRIBER PRICE | -8.00 | -8.00 |

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